

## REMARKS

This Amendment is in response to the Office Action mailed March 15, 2002. In the Office Action, claims 2-6, 8-17 and 20-24 have been rejected under 35 U.S.C. §103(a). Applicant respectfully disagrees with the rejections in their entirety.

### I. REJECTION OF CLAIMS 6, 12, 13 AND 20

Claims 6, 12, 13 and 20 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,311,588 issued to Polcyn, et al. (Polcyn) in view of U.S. Patent No. 6,125,645 issued to Modi, et al. (Modi). Applicant traverses the rejection in its entirety.

Polcyn teaches a peak-to-average ratio, which is equivalent to the peak power divided by the average total power. *See* column 7, lines 54-55 of Polcyn. Such computations differ from the peak-to-mean likelihood ratio as set forth in the above-identified claims. Applicant strongly disagrees that Polcyn suggests/teaches any inference that the calculation of a first ratio level of audio signals and an average power level of signals is generally equivalent to determining the “peak-to-mean likelihood ratio” as set forth on page 2 of the Office Action. Rather, the “peak-to-mean likelihood ratio” as claimed is generally equal to a ratio with (i) a denominator having a value substantially equal to a difference between a maximum averaged peak-to-mean ratio and a minimum averaged peak-to-mean ratio and (ii) a numerator having a value substantially equal to a difference between the maximum averaged peak-to-mean ratio and the averaged peak-to-mean ratio.

In addition, the Office Action states that Polcyn does not disclose that the ratios used in the detection method are normalized. However, it is alleged that Modi teaches normalizing the confidence scores of likelihood scores and likelihood ratios (col. 4, lines 15-16; col. 9, lines 32-36). Applicant respectfully disagrees with the allegations and contends

that the teachings of Modi, combined with the teachings of Polcyn, do not render the claimed invention unpatentable.

Modi teaches likelihood ratio statistics such as a likelihood ratio ( $L_R$ ) and whether that ratio is above or below a verification threshold. The likelihood ratio ( $L_R$ ) is used for testing a null hypothesis (i.e., the hypothesis of a given keyword exists in a segment of speech) against an alternative hypothesis (i.e., that the given keyword does not exist within the segment of speech). The testing is set forth on equation 7 (column 8) of Modi. This likelihood ratio ( $L_R$ ) has no application to or associated with peak-to-average ratio calculations as set forth in the claimed subject matter.

In summary, it is respectfully submitted that neither Polcyn nor Modi, alone or in combination, render the claimed invention obvious because (1) Polcyn does not describe or even suggest a "peak-to-mean likelihood" ratio as claimed and (2) there is no motivation to combine the teachings of Polcyn and Modi. As aptly stated by the June 30, 2000 decision by the Federal Circuit in *In re Kotzab*, 55 U.S.P.Q.2D (BNA) 1313, 1316 (Fed. Cir. 2000):

Most if not all inventions arise from a combination of old elements. Thus, every element of a claimed invention may often be found in the prior art. However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant.

In light of the foregoing, Applicant respectfully requests that the outstanding §103(a) rejection be withdrawn.

II. REJECTION OF CLAIMS 2-5, 8-9, 11, 14-17 AND 21-24

Since these claims are dependent on claims 6, 12, 13 and 20, there are allowable based on their dependency. Applicant reserves the right to discussion additional grounds for traversing the rejection.

VERSION WITH MARKINGS TO SHOW CHANGES MADE

No changes were made to the claims.

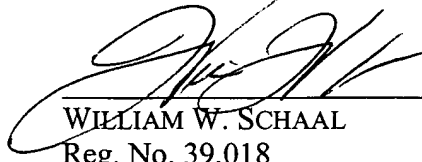
CONCLUSION

In view of the amendments and remarks made above, it is respectfully submitted that all pending claims are in condition for allowance, and such action is respectfully solicited.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: June 28, 2002

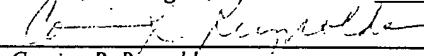


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CERTIFICATE OF MAILING

*I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on: June 28, 2002.*

  
Corinn R. Reynolds 6/28/02  
Date